

FORM PTO-1390 (REV 12-29-99)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTORNEY'S DOCKET NUMBER ULT4084P0160US	
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371				U.S. APPLICATION NO. (if known, see 37 CFR 1.5) <div style="font-size: 24pt; font-weight: bold;">09/582253</div>	
INTERNATIONAL APPLICATION NO. PCT/GB99/00262		INTERNATIONAL FILING DATE 26 January 1999 (26.01.99)		PRIORITY DATE CLAIMED 26 March 1998 (26.03.98)	
TITLE OF INVENTION <div style="text-align: center;">CONNECTING DEVICE</div>					
APPLICANT(S) FOR DO/EO/US <div style="text-align: center;">Christopher Richardson</div>					
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:					
<ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371. 2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371. 3. <input checked="" type="checkbox"/> This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1). 4. <input checked="" type="checkbox"/> A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date. 5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2)) <ol style="list-style-type: none"> a. <input type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau). b. <input checked="" type="checkbox"/> has been transmitted by the International Bureau. c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US). 6. <input type="checkbox"/> A translation of the International Application into English (35 U.S.C. 371(c)(2)). 7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)) <ol style="list-style-type: none"> a. <input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau). b. <input type="checkbox"/> have been transmitted by the International Bureau. c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired. d. <input checked="" type="checkbox"/> have not been made and will not be made. 8. <input type="checkbox"/> A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)). 9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). 10. <input type="checkbox"/> A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)). 					
Items 11. to 16. below concern document(s) or information included:					
<ol style="list-style-type: none"> 11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98. 12. <input checked="" type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included. 13. <input checked="" type="checkbox"/> A FIRST preliminary amendment. <input type="checkbox"/> A SECOND or SUBSEQUENT preliminary amendment. 14. <input type="checkbox"/> A substitute specification. 15. <input type="checkbox"/> A change of power of attorney and/or address letter. 16. <input checked="" type="checkbox"/> Other items or information: <div style="margin-left: 20px;"> COPIES OF: <ol style="list-style-type: none"> a. International Publication No. WO 99/49253 b. Written Opinion (PCT Rule 66) c. Response to Written Opinion (letter dated 18 January 2000) d. International Preliminary Examination Report (PCT Rule 71.1) </div> 					
Mailed on June 22, 2000, via Express Mail Mailing Label No. EL582856745US					

U.S. APPLICATION NO. (If known, see 37 CFR 1.53) 09/582253		INTERNATIONAL APPLICATION NO. PCT/GB99/00262		ATTORNEY'S DOCKET NUMBER ULT4084P0160US	
--	--	---	--	--	--

17. <input checked="" type="checkbox"/> The following fees are submitted: BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)) : Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO \$970.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO \$840.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$690.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4) \$670.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(1)-(4) \$96.00 <div style="text-align: right;">ENTER APPROPRIATE BASIC FEE AMOUNT =</div>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: left;">CALCULATIONS</th> <th style="text-align: left;">PTO USE ONLY</th> </tr> <tr> <td colspan="2" style="height: 100px;"></td> <td></td> </tr> </table>		CALCULATIONS		PTO USE ONLY			
CALCULATIONS		PTO USE ONLY						

Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$ 0.00	
--	--	--	--	---------	--

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	14 - 20 =	0	X \$18.00	\$ 0.00	
Independent claims	1 - 3 =	0	X \$78.00	\$ 0.00	
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ \$260.00	\$ 0.00	
TOTAL OF ABOVE CALCULATIONS =				\$ 840.00	
Reduction of 1/2 for filing by small entity, if applicable. A Small Entity Statement must also be filed (Note 37 CFR 1.9, 1.27, 1.28).				\$ 0.00	
SUBTOTAL =				\$ 840.00	
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				\$ 0.00	
TOTAL NATIONAL FEE =				\$ 840.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property				\$ 40.00	
TOTAL FEES ENCLOSED =				\$ 880.00	
				Amount to be refunded:	\$
				charged:	\$

a. ☒ A check in the amount of \$ 880.00 to cover the above fees is enclosed.

b. ☐ Please charge my Deposit Account No. 04-1644 in the amount of \$ _____ to cover the above fees.
 A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any
 overpayment to Deposit Account No. 04-1644. A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

ROCKEY, MILNAMOW & KATZ, LTD.
 Two Prudential Plaza, 47th Floor
 180 North Stetson Avenue
 Chicago, Illinois 60601

Telephone: (312) 616-5400
 Facsimile: (312) 616-5460

Allen J. Hoover

SIGNATURE: _____

Allen J. Hoover

NAME _____

24,103

REGISTRATION NUMBER _____

534 Rec'd PCT/PTO 22 JUN2000

Express Mail Mailing Label No. EL582856745US

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
ACTING AS THE UNITED STATES DESIGNATED/ELECTED OFFICE**

Applicant:	Christopher Richardson)	
)	Attorney Docket: ULT4084P0160US
Application:	PCT/GB99/00262)	
)	Associate Docket: P4027
Int. Filing Date:	26 January 1999)	

**FIRST PRELIMINARY AMENDMENT
UPON ENTRY INTO NATIONAL STAGE**

Box PCT
Commissioner for Patents
Washington, D.C. 20231

Sir:

Please cancel claims 1 through 12 and substitute claims 13 through 20 as set forth below:

13. A connecting device suitable for attaching a pipe to a surface comprising a first part fixable to the surface and a second part slidably attachable to the first part in the direction of the pipe to a limited extent and forming an at least partial enclosure for the pipe, the first and second parts having co-operating formations enabling the attachment of the second part to the first part to be selectively adjustable, whereby spacing of the pipe from the surface is adjustable.

14. A device as claimed in claim 13, wherein the first part is U-shaped providing a base, which is arranged to be fixed to the surface, and providing arms extending from the base.

15. A device as claimed in claim 13 or 14, wherein the second part is U-shaped having a base and an arm extending from each end of the base.

16. A device as claimed in claim 15, wherein the arms of the first and second parts are interchangeable.

Application No. PCT/GB99/00262
FIRST PRELIMINARY AMENDMENT
UPON ENTRY INTO NATIONAL STAGE
Page 2

17. A device as claimed in claim 16, wherein inner faces of the arm of one part have a series of spaced teeth, which are selectively engageable between corresponding teeth on outer faces of the arms of the other part.

18. A device as claimed in claim 17, wherein the teeth of the outer faces of the arms of the other part are within channels in the arms.

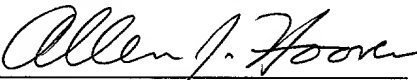
19. A device as claimed in claim 17, wherein the respective series of teeth are arranged so that the two parts of the device are only engageable to a limited extent, whereby one part is prevented from slipping past the other part.

20. A device as claimed in claim 18, wherein the respective series of teeth are arranged so that the two parts of the device are only engageable to a limited extent, whereby one part is prevented from slipping past the other part.

REMARKS

Claims 13 through 20, *supra*, conform essentially to claims 1 through 7 submitted in a response to the Written Opinion dated November 17, 1999, and appended to the International Preliminary Examination Report, which found that claim 1 (to which claim 13, *supra*, conforms) was novel and involved an inventive step.

Respectfully submitted,

By 

Allen J. Hoover

Reg. No. 24,103

Rockey, Milnamow & Katz, Ltd.
Two Prudential Plaza, Suite 4700
Chicago, Illinois 60601
Telephone: (312) 616-5400
Facsimile: (312) 616-5460
June 22, 2000

M 24.01.00

09/582253

1

TITLE: Connecting Device

PTO/PCT Rec'd 22 JUN 2000

DESCRIPTION

This invention concerns connecting devices, especially connecting devices for attaching pipes or other elongate items to underlying surfaces, such as to walls.

A down pipe for delivering water collected in a gutter to a drain is usually attached to a wall using clips that are secured to the wall and fastened around the down pipe. Available clips are of one size and so do not allow for variations in spacing between the down pipe and the wall which occur due to irregularities in the wall and the relative positioning of the guttering to which the down pipe is connected at its top. Because of the above, sometimes clips cannot be fastened properly and so spring open or strain is put on the down pipe affecting its connection to the guttering or its other fastening clips.

An object of this invention is to provide a connecting device especially but not exclusively suitable for attaching a pipe to a surface.

A connecting device suitable for attaching a pipe to a surface comprising a first part fixable to the surface and a second part slidably attachable to the first part in the direction of the pipe to a limited extent and forming an at least partial enclosure for the pipe, the first and second parts having co-operating formations enabling the attachment of the second part to the first part to be selectably adjustable, whereby spacing of the pipe from the surface is adjustable.

The first part of the connecting device of the invention is preferably U-shaped providing a base which is arranged to be fixed to the surface, such as, for example, by means of one or more screws or the like through provided holes in the base, and arms extending from the base.

The second part of the connecting device of the invention is preferably also U-shaped having a base and an arm extending from each end of the base. The arms of the first and second parts of the connecting device of the invention are preferably selectively interengageable. The inner faces of the arms of one part preferably have a series of spaced teeth which are selectively engageable between corresponding teeth on outer faces of the arms of the other connecting device part.

The teeth of the outer faces of the arms of the other connecting device part, preferably the second part are preferably within channels in the arms, so that the arms of one part fit into the corresponding channels of the arms of the other part when the respective series of teeth are interengaged.

The respective series of teeth are preferably arranged so that the two parts of the connecting device of the invention can only be engaged to a limited extent in order to prevent them from slipping past each other. Thus, abutments may be provided on each arm for the teeth of an arm of the other part of the device with which it is to engage. The abutments may be provided by base strips from which the teeth of each arm extend. Alternatively, the teeth may be shaped, such as by being triangular in plan, whereby their extent of movement together is limited by said shaping.

The second part of the connecting device of the invention preferably has inwards returns at the ends of its arms, so that a pipe or the like is retained in said second part.

The connector device of the invention is preferably used by fixing the first part to a surface and sliding the second part onto a pipe and down onto the first part to engage the two parts and hold the pipe to the surface. The second part will engage the first part at a desired spacing from the pipe from the surface.

This invention will now be further described, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 is a perspective view from above of a down pipe connecting device according to the invention;

Figure 2 is a perspective view from below of the connecting device of Figure 1;

Figure 3 is a part cut away perspective view from above of the connecting device of Figure 1;

Figure 4 is a perspective view from below of the connecting device of Figure 1 fitted to a down pipe;

Figure 5 is a perspective from above of the connecting device of Figure 1 fitted to a down pipe;

Figure 6A to D shows steps in fitting a connecting device of Figure 1 to a down pipe.

Referring to the accompanying drawings, a connecting device or clip 10 for securing a down pipe 11 to a wall or other surface, such as a mullion or corner

post of a glazed conservatory wall, comprises two parts 12 and 14. The two parts 12, 14 are generally U-shaped and shaped to fit together in an overlapping fashion.

The one part 12 has a base 16 and sides 18 extending generally normally from the base. The base 16 is provided with a screw hole 20 so that it can be secured to a wall or other suitable surface. The sides 18 have on their facing surfaces spaced teeth 22 extending upwards from a base strip 24.

The other part 14 of the clip has a base 26 and sides 28 that turn inwards at their ends 30 to a small extent. The part 14 has its internal corners rounded to correspond to the shape of conventional square section down pipes. Of course, the part 14 of the clip may be of any desired shape, such as to fit circular section pipes. On their internal surfaces, the base 26 and sides 28 and each have a pair of spaced ribs 32. The ends 30 of the sides 28 each also have on their internal surface at the end thereof a rib 34. The ribs 32 and 34 simply facilitate the fitting of the clip to a downpipe by reducing areas of contact and hence reducing friction between the clip and the down pipe.

The sides 28 of the second clip part 14 are wider over a major portion of their length up to their free ends and the wider portions are slotted from below to form channels 42. On the inside of each channel 42 on one face thereof from a base strip 43 extend a series of spaced teeth 44 shaped and sized to interfit between the teeth 22 of the sides 18 of the one part 12. Thus, the second part 14 can be slid down onto the first part 12 with the teeth of the one part engaged with the teeth of the other part at a desired position to give a desired spacing of the

second part from the base 16 of the first part. The respective base strips 24 and 43 limit the extent of interengagement of the teeth.

The clip 10 is used in the following manner as shown in Figures 6A to 6D of the accompanying drawings to fix a down pipe to a wall or other suitable surface. Firstly the first part 12 is fixed to the wall or other suitable surface at a desired location using a screw through the base 16. Then the second part is placed on the down pipe and the down pipe positioned, which may involve coupling thereof to a gutter. The second part of the clip is then slid down onto the first part so that their respective teeth interengage. The two parts of the clip may lock together simply by friction, by mechanical fixings or by engagement of integral locking components.

It will be appreciated that whilst the connecting device of the invention has been described in relation to connecting down pipes to a structure, the connecting device of the invention may be used for connecting other elongate items to an underlying structure in any orientation.

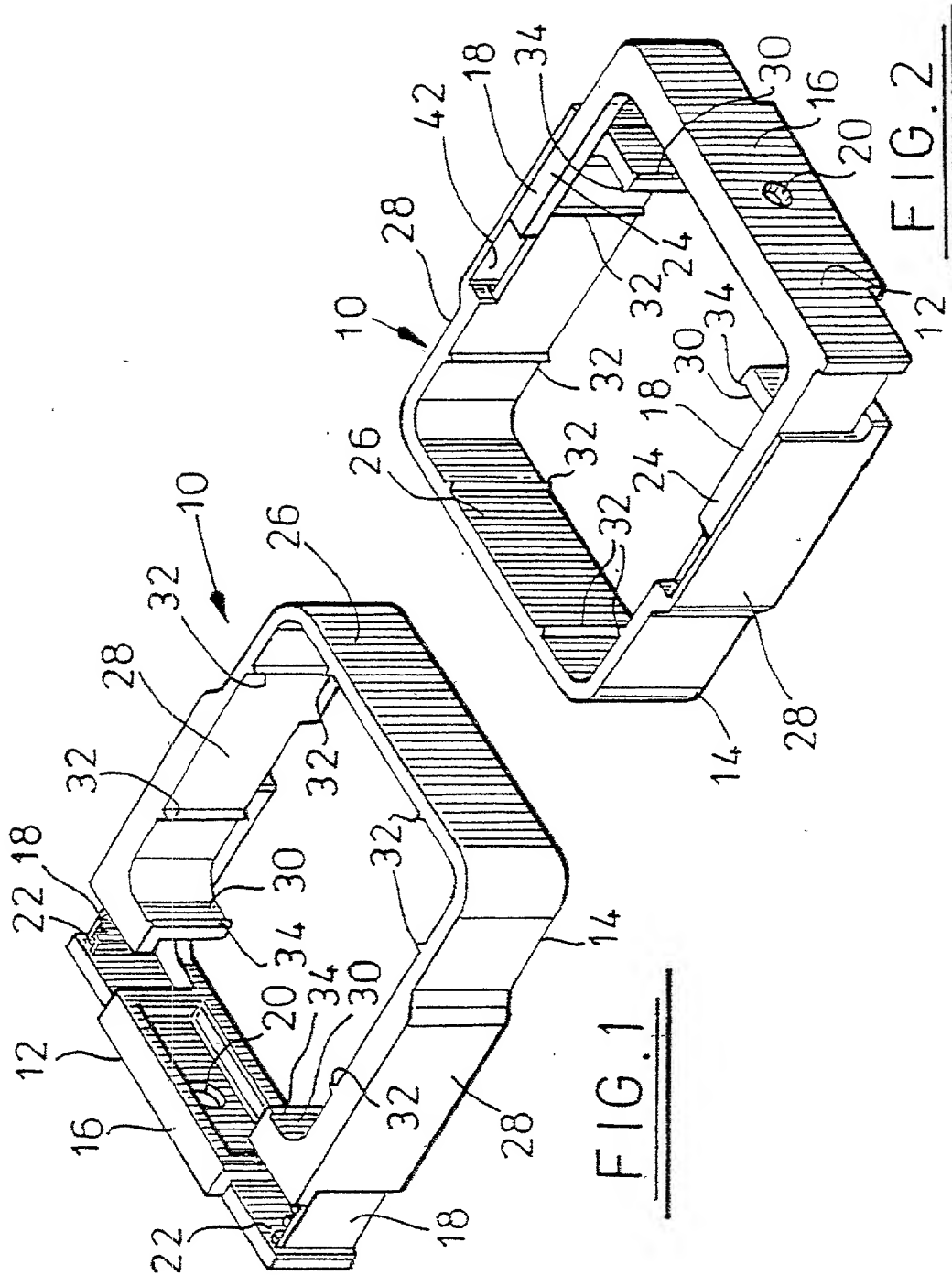
M 24.01.00

6

CLAIMS

1. A connecting device suitable for attaching a pipe to a surface comprising a first part fixable to the surface and a second part slidably attachable to the first part in the direction of the pipe to a limited extent and forming an at least partial enclosure for the pipe, the first and second parts having co-operating formations enabling the attachment of the second part to the first part to be selectably adjustable, whereby spacing of the pipe from the surface is adjustable.
2. A device as claimed in claim 1, wherein the first part is U-shaped providing a base, which is arranged to be fixed to the surface, and arms extending from the base.
3. A device as claimed in claims 1 or 2, wherein the second part is U-shaped having a base and an arm extending from each end of the base.
4. A device as claimed in claim 3, wherein the arms of the first and second parts are selectively interengageable.
5. A device as claimed in claim 4, wherein inner faces of the arm of one part have a series of spaced teeth which are selectively engageable between corresponding teeth on outer faces of the arms of the other part.
6. A device as claimed in claim 5, wherein the teeth of the outer faces of the arms of the other part are within channels in the arms.
7. A device as claimed in claim 5 or 6, wherein the respective series of teeth are arranged so that the two parts of the device are only engageable to a limited extent, whereby one part is prevented from slipping past the other part.

8. A device as claimed in claim 7, wherein abutments are provided on each arm for the teeth of an arm of the other part.
9. A device as claimed in claim 8, wherein the abutments are provided by base strips from which the teeth of each arm extend.
10. A device as claimed in claim 7, wherein the respective series of teeth are shaped to limit their extent of movement together.
11. A device as claimed in claim 10, wherein the teeth are triangular in plan.
12. A device as claimed in any one of claims 1 to 10, wherein the second part has inwards returns at the ends of its arms.



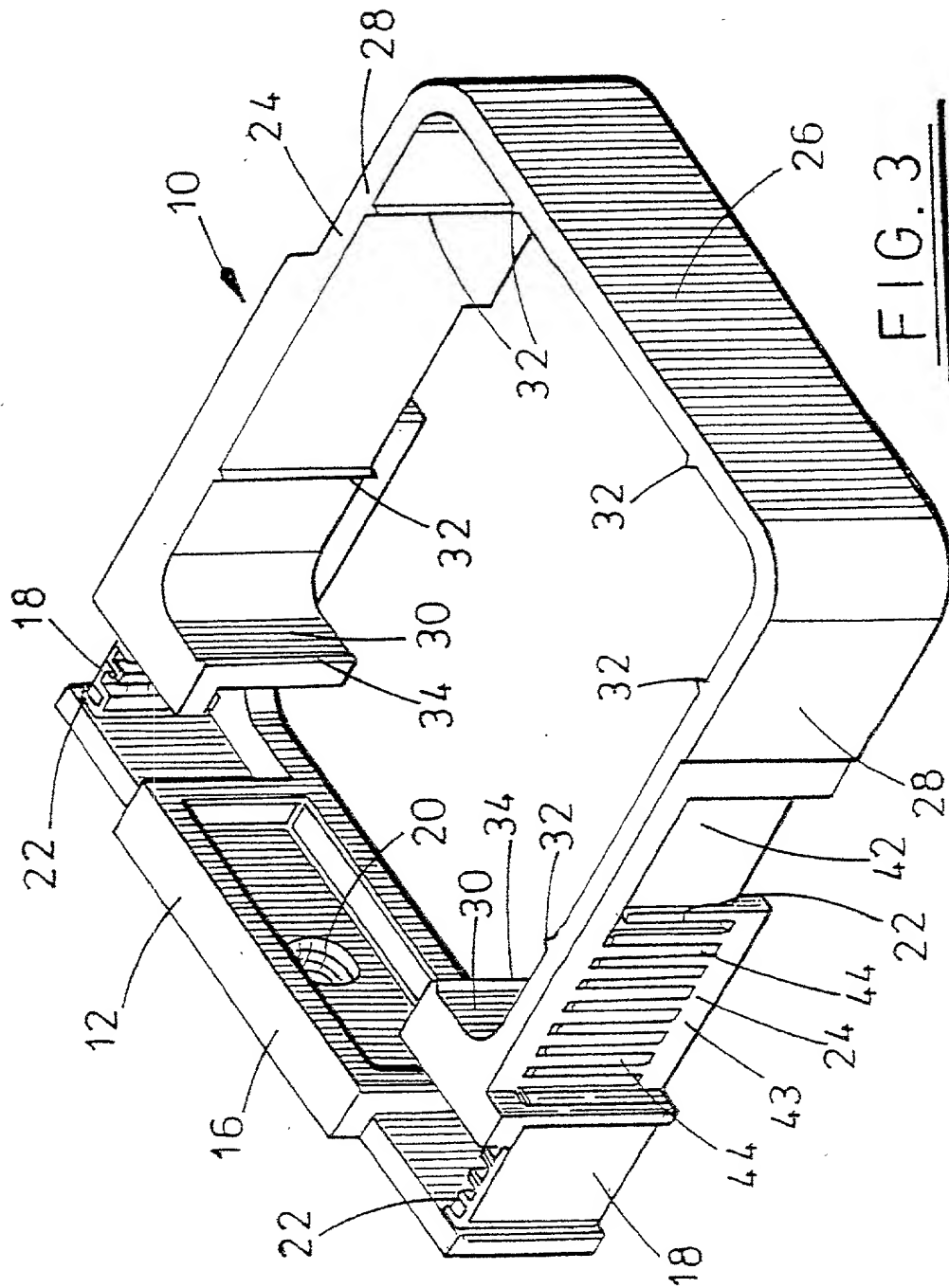


FIG. 3

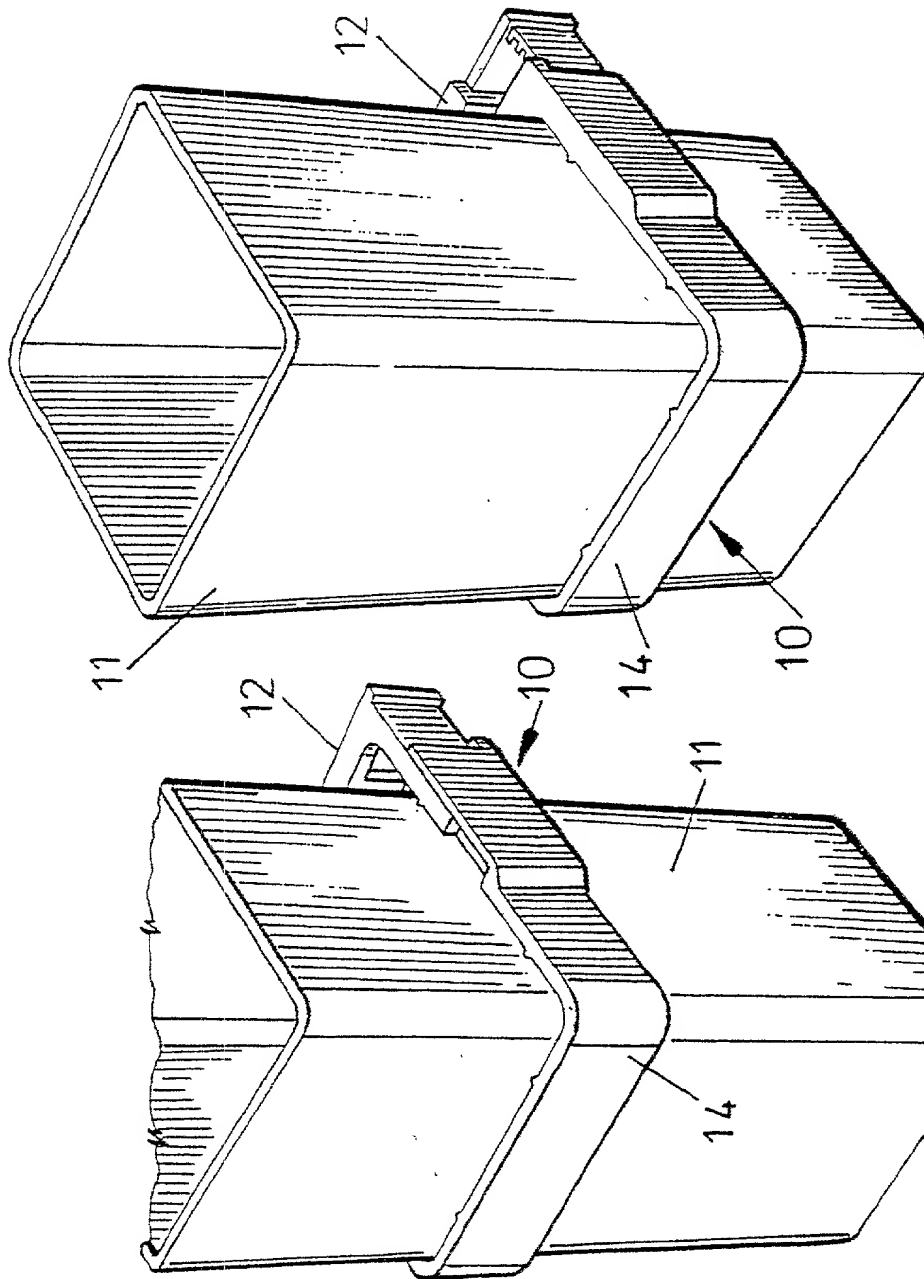


FIG. 5

FIG. 4

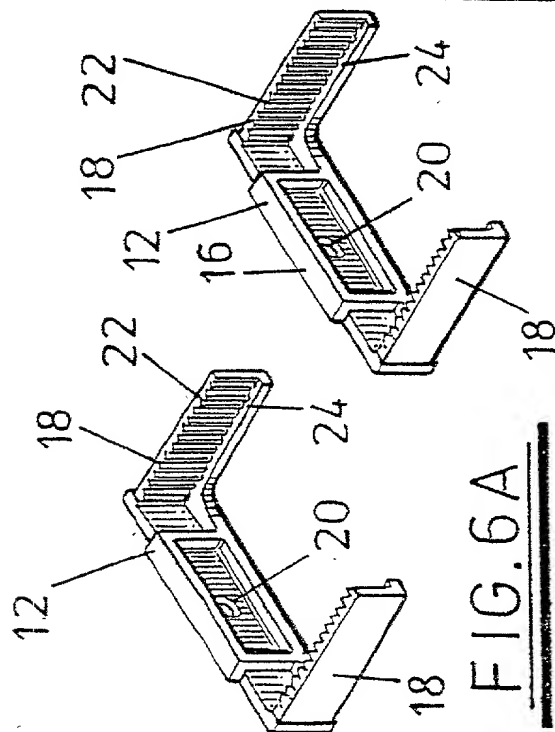
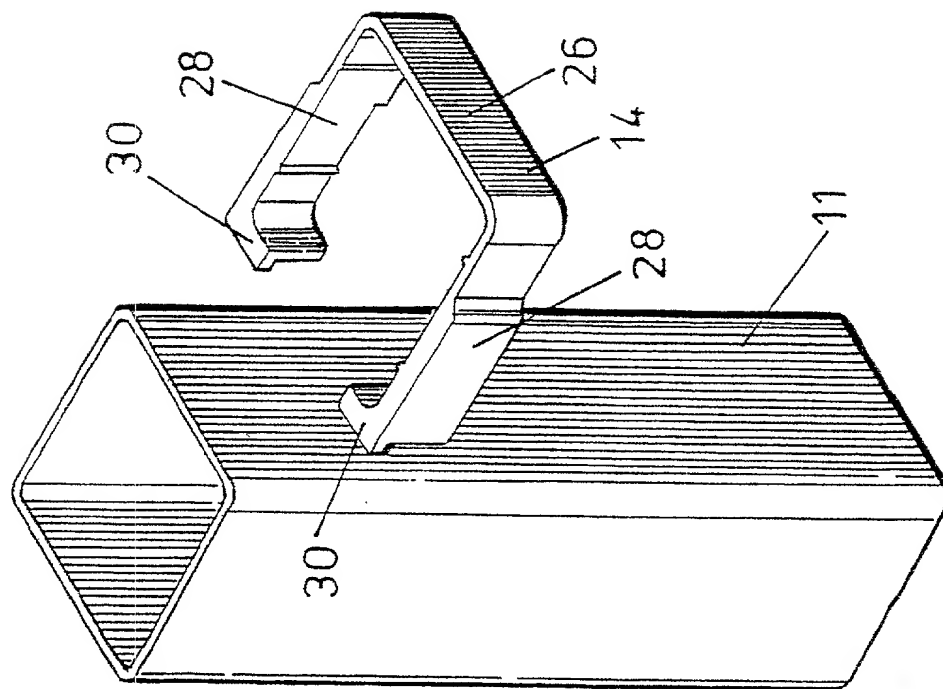


FIG. 6B

FIG. 6A

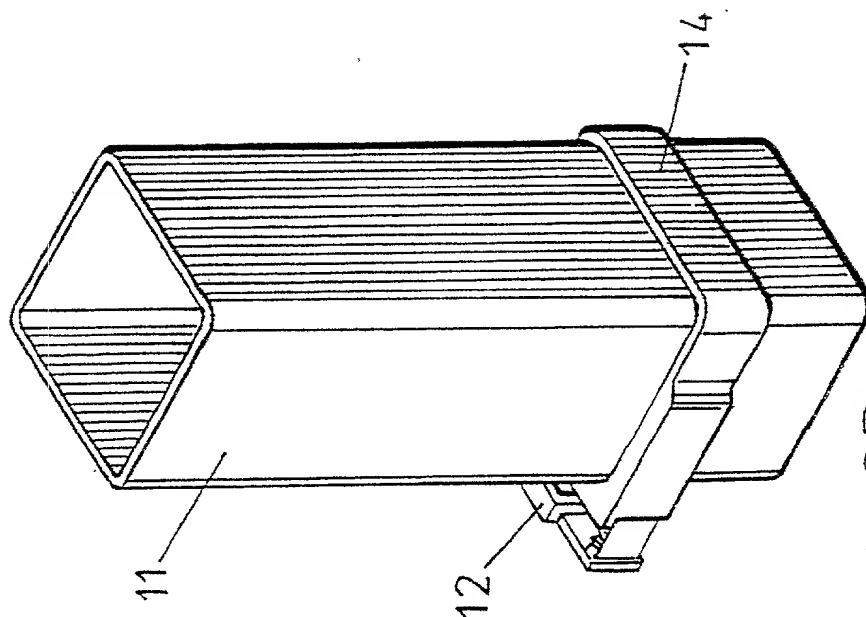


FIG. 6D

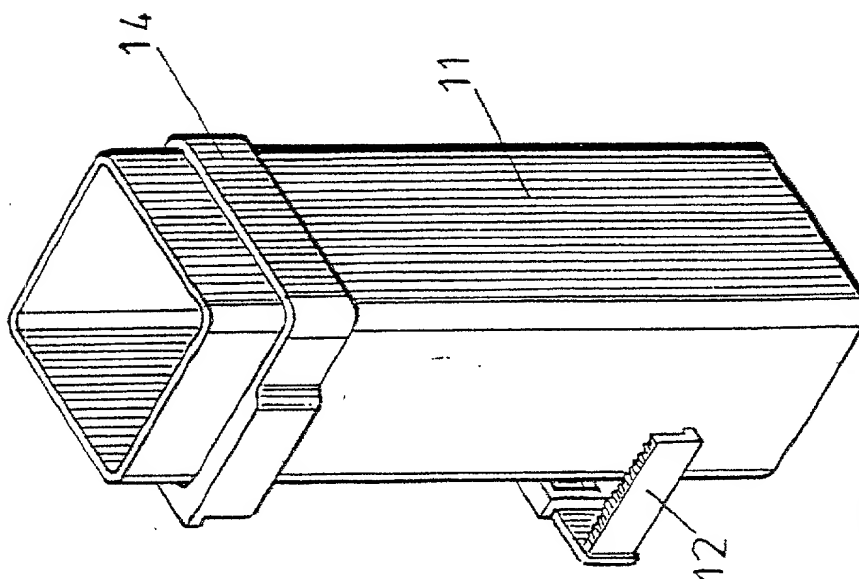


FIG. 6C

PATENT APPLICATION DECLARATION AND POWER OF ATTORNEY

I HEREBY DECLARE THAT:

My residence, post office address, and citizenship are as stated next to my name in PART A on pages 2 and 3 hereof.

I believe I am the original, first, and sole inventor (if only one name is listed) or an original, first, and joint inventor (if plural names are listed) of the subject matter which is claimed and for which a patent is sought on the invention entitled: CONNECTING DEVICE the specification of which:

☐ is attached hereto;

☐ was filed on January 26, 1999 as ^{International} Application Serial No. PCT/GB99/00262 and was amended on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to herein.

I acknowledge the duty to disclose all information to the Patent and Trademark Office known to me to be material to patentability of this application, as defined in Title 37, Code of Federal Regulations, Sec. 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Sec. 119 of any foreign application(s) for patent or inventor's certificate listed in PART B on page 3 hereof and have also identified in PART B on page 3 hereof any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

I hereby claim the benefit under Title 35, United States Code, Sec. 120 of any United States application(s) listed in PART C on page 3 hereof and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, Sec. 112, I acknowledge the duty to disclose all information to the Patent and Trademark Office known to me to be material to patentability of this application, as defined in Title 37, Code of Federal Regulations, Sec. 1.56, which became available between the filing date of the prior application and the national or PCT international filing date of this application.

I hereby declare that all statements made herein of my knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I hereby appoint the following as my attorneys or agents with full power of substitution to prosecute this application and transact all business in the United States Patent and Trademark Office connected therewith:

Randall T. Erickson	Reg. No. <u>33,872</u>	Kathleen A. Lyons	Reg. No. <u>31,852</u>	Robert B. Polit	Reg. No. <u>33,993</u>
Nancy R. Gamburd	Reg. No. <u>38,147</u>	John P. Milnamow	Reg. No. <u>20,635</u>	Keith V. Rockey	Reg. No. <u>24,713</u>
Stephen D. Geimer	Reg. No. <u>28,846</u>	Thomas E. Northrup	Reg. No. <u>33,268</u>	Thomas I. Ross	Reg. No. <u>29,275</u>
Allen J. Hoover	Reg. No. <u>24,103</u>	Lisa V. Mueller	Reg. No. <u>38,978</u>	Joel E. Siegel	Reg. No. <u>25,440</u>
Martin L. Katz	Reg. No. <u>25,011</u>	Paul M. Odell	Reg. No. <u>28,332</u>	Paul M. Vargo	Reg. No. <u>29,116</u>


whose mailing address for this application is: ROCKEY, MILNAMOW & KATZ, LTD.
Two Prudential Plaza - Suite 4700
180 North Stetson Avenue
Chicago, Illinois 60601
Telephone: (312) 616-5400

PATENT APPLICATION DECLARATION AND POWER OF ATTORNEY

PART A: Inventor Information and Signature

Full name of SOLE or FIRST inventor CHRISTOPHER RICHARDSON
 Citizenship UK Residence 4 WILLOW DRIVE, BARROW, CLITHEROE, BB7 9FG
LANCASHIRE. UNITED KINGDOM

Post Office Address (If different) GBX

First Inventor's signature:  Date: 3.5.2000

Full name of SECOND joint inventor, if any _____
 Citizenship _____ Residence _____

Post Office Address (If different) _____

Second Inventor's signature: _____ Date: _____

Full name of THIRD joint inventor, if any _____
 Citizenship _____ Residence _____

Post Office Address (If different) _____

Third Inventor's signature: _____ Date: _____

Full name of FOURTH joint inventor, if any _____
 Citizenship _____ Residence _____

Post Office Address (If different) _____

Fourth Inventor's signature: _____ Date: _____

Full name of FIFTH joint inventor, if any _____
 Citizenship _____ Residence _____

Post Office Address (If different) _____

Fifth Inventor's signature: _____ Date: _____

Full name of SIXTH joint inventor, if any _____
 Citizenship _____ Residence _____

Post Office Address (If different) _____

Sixth Inventor's signature: _____ Date: _____

See Pages 1 and 3 attached and made a part hereof.

PATENT APPLICATION DECLARATION AND POWER OF ATTORNEY**PART A: (Continued)**

Full name of SEVENTH joint inventor, if any _____

Citizenship _____ Residence _____

Post Office Address (If different) _____

Seventh Inventor's signature: _____ Date: _____

PART B: Prior Foreign Application(s)

Serial No.	Country	Day/Month/Year Filed	Priority Claimed	
			<input type="checkbox"/> Yes	<input type="checkbox"/> No
			<input type="checkbox"/> Yes	<input type="checkbox"/> No

PART C: Claim for Benefit of Filing Date of Earlier U.S. Application(s)

Serial No.	Filing Date	Status:		
		<input type="checkbox"/> Patented	<input type="checkbox"/> Pending	<input type="checkbox"/> Abandoned
		<input type="checkbox"/> Patented	<input type="checkbox"/> Pending	<input type="checkbox"/> Abandoned

See Pages 1 and 2 to which this is attached and from which this Page 3 continues.